

# TYUIOP

## *AERONAUTICAL SYSTEMS*

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### PREDATOR DATALINK CONTROL MODULE (PDCM)

### PRELIMINARY DESIGN REVIEW

**Presented by:**

**3 Feb 98 - Stewart Teaze**

**Hardware**

**3-4 February 1998**

# PDCM PDR AGENDA

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- **PDCM Functions**
- **Subsystem Interfaces (External)**
- **Subsystem Interfaces (Internal)**
- **Environmental**
- **Electromagnetic Compatibility**
- **Power Requirements**
- **PDCM - Front View**
- **PDCM - Side View**
- **PDCM - 3D View**
- **Packaging**
- **Physical Data**
- **Parts List**
- **COTS**
- **Design Decisions Pending**

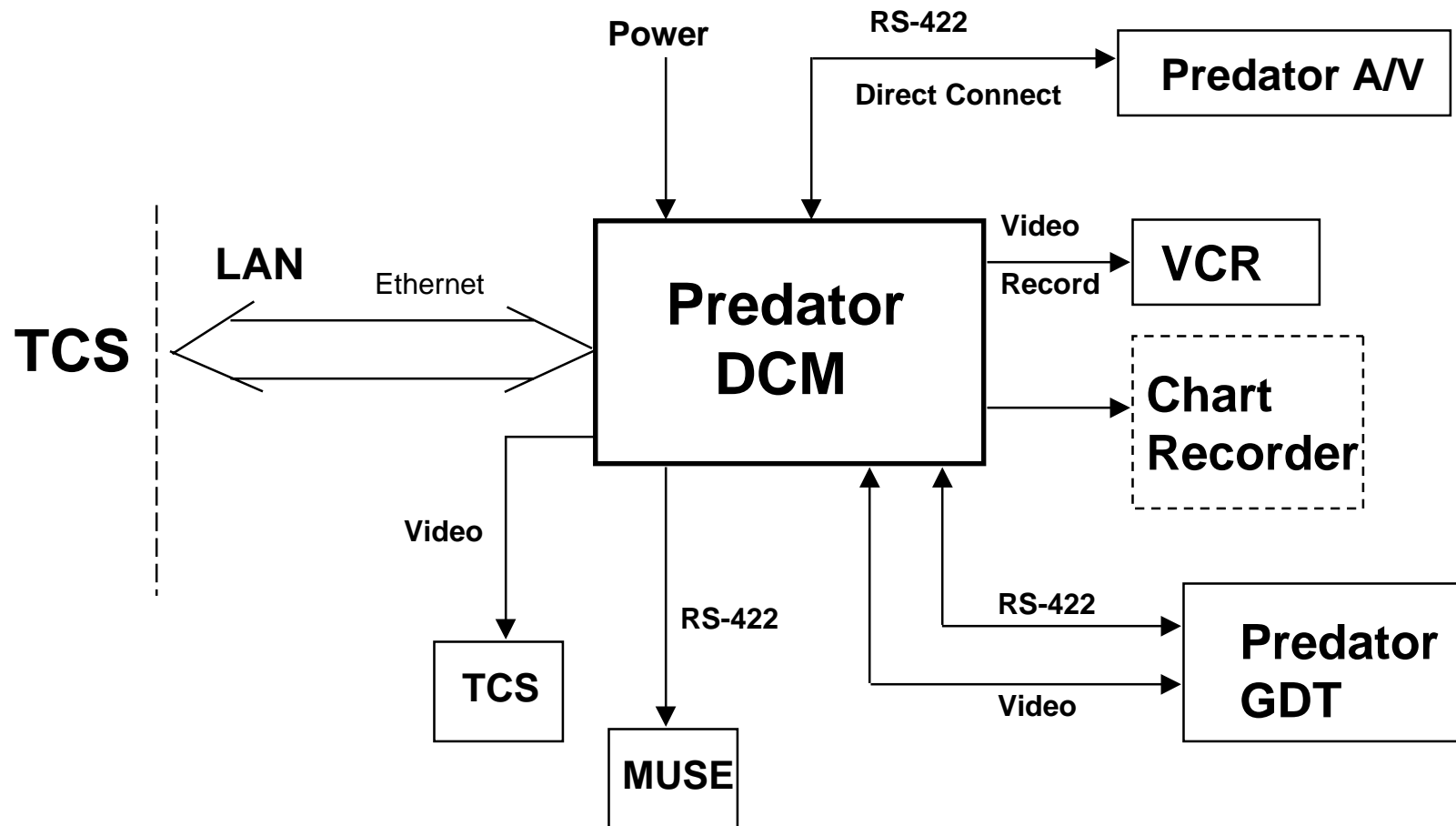
# PDCM PDR FUNCTIONS

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- **Interface to Predator GDT (Video and Serial)**
- **Ethernet (Thin-net) Network Interface**
- **Direct Connect to Predator for Pre-flight Check Out**
- **Record Downlinked Video**
- **Serial Port Provided for Flight Simulator (MUSE)**

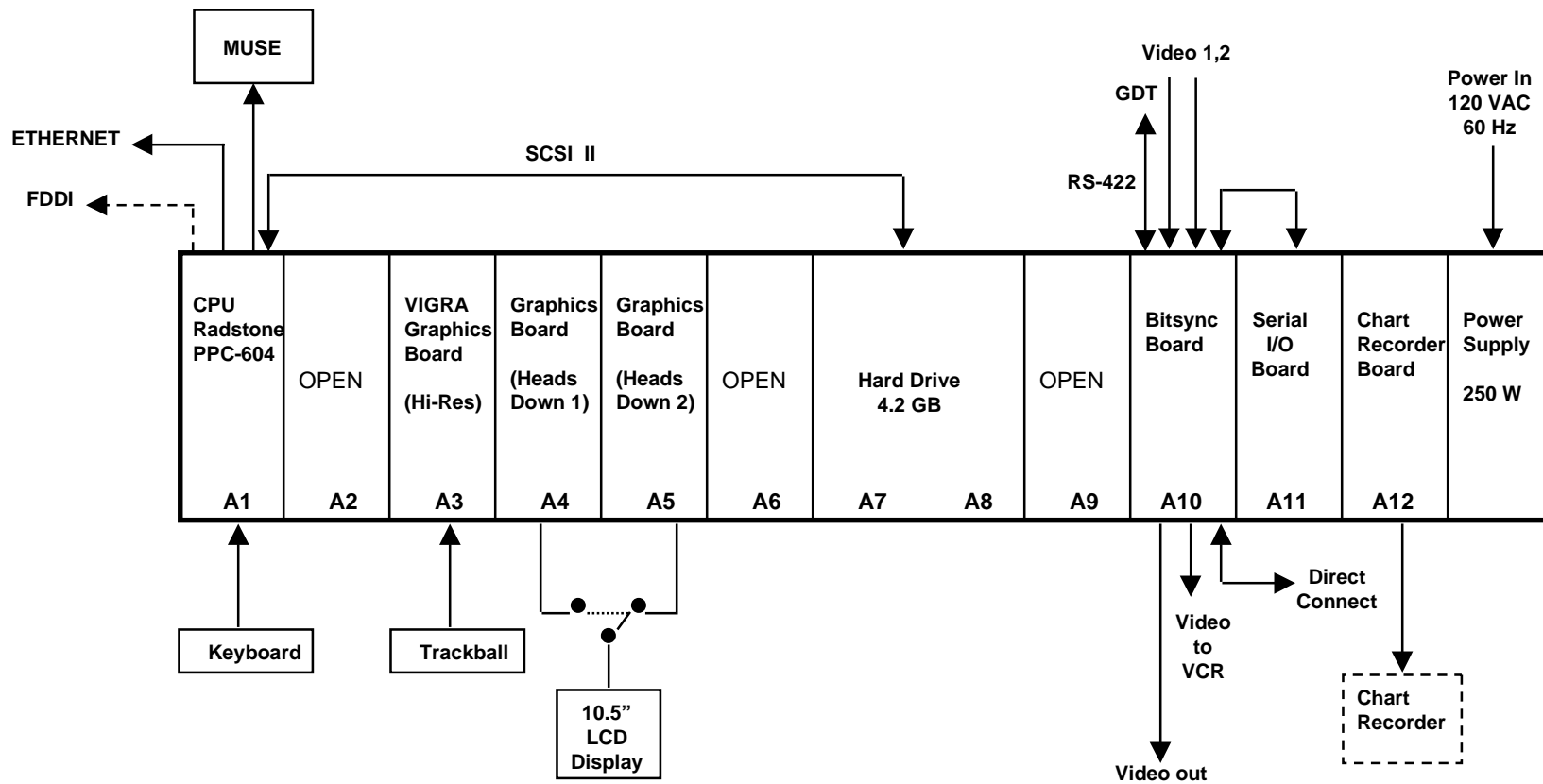
# PDCM PDR

## Subsystem Interfaces (External)



# PDCM PDR

## Subsystem Interfaces (PDCM Internal)



# **PDCM PDR**

## **Environmental Considerations**

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### **Temperature:**

<b>0 degree C to +40 degree C</b>	<b>Operating</b>
<b>- 20 degree C to +60 degree C</b>	<b>Non-Operating</b>

### **Altitude:**

<b>Up to 10,000 FT</b>	<b>Operating</b>
<b>Up to 40,000 FT</b>	<b>Non-Operating</b>

### **Humidity:**

<b>5% to 85%</b>	<b>Operating</b>
<b>0% to 90%</b>	<b>Non-Operating</b>

# PDCM PDR

## Electromagnetic Compatibility

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- **The PDCM Complies with FCC part 15 Unintentional Radiator, Class A.**

# **PDCM PDR**

## **Power Requirements**

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- **90-130 VAC, 47-63 Hz Single Phase, or 180-260 VAC, 47-63 Hz (Selectable).**
- **Manual On/Off Switch on PDCM Front Panel.**
- **Circuit Protection Includes a 10 Amp Breaker on the PDCM Front Panel.**



# PDCM PDR

## Packaging

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- **PDCM Prototype are COTS**
  - They can be ruggedized if necessary

# PDCM PDR

## Physical Data

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- **12.25" H x 19" W x 18" D (PDCM)**
- **3.5" H x 19" W x 12" D (VCR)**
- **Volume:        2.42 FT<sup>3</sup> (PDCM)**  
**0.46 FT<sup>3</sup> (VCR)**  
**Total: 2.88 FT<sup>3</sup>**
- **Weight:         30.16 lb. (PDCM)**  
**4.40 lb. (VCR)**  
**Total: 34.56 lb.**

# PDCM PDR

## Parts List

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- (see attached BOM)

# PDCM PDR

## COTS

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- **COTS Items Include:**
  - **LCD Display**
  - **All VME Cards**

# PDCM PDR

## Design Decisions Pending

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- **Interface to Standard Control Console and Footpedal Assy.**
- **FDDI or ATM Networking Interface**